COMMERCIAL STANDARD CS157–56

Supersedes CS157–49

Pine Plywood (Ponderosa Pine, Sugar Pine, and Idaho White Pine)

A recorded voluntary standard of the trade published by the U. S. Department of Commerce

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U. S. DEPARTMENT OF COMMERCE

SINCLAIR WEEKS, Secretary

Prepared by

OFFICE OF TECHNICAL SERVICES

Commodity Standards Division

COMMODITY STANDARDS

Simplified Practice Recommendations and Commercial Standards are developed by manufacturers, distributors, and users in cooperation with the Commodity Standards Division of the Office of Technical Services, and with the National Bureau of Standards.

The purpose of Simplified Practice Recommendations is to eliminate avoidable waste through the establishment of standards of practice for stock sizes and varieties of specific commodities that currently are in general production and demand. The purpose of Commercial Standards is to establish standard methods of test, rating, certification, and labeling of commodities, and to provide uniform bases for fair competition.

The adoption and use of a Simplified Practice Recommendation or a Commercial Standard is voluntary. However, when reference to a Commercial Standard is made in contracts, labels, invoices, or advertising literature, the provisions of the standard are enforcible through usual legal channels as a part of the sales contract.

A Simplified Practice Recommendation or a Commercial Standard originates with the proponent industry. The sponsors may be manufacturers, distributors, or users of the specific product. One of these three elements of industry submits to the Commodity Standards Division the necessary data to be used as the basis for developing a standard of practice. The Division, by means of assembled conferences or letter referenda, or both, assists the sponsor group in arriving at a tentative standard of practice and thereafter refers it to the other elements of the same industry for approval or for constructive criticism that will be helpful in making any necessary adjustments. The regular procedure of the Division assures continuous servicing of each effective Simplified Practice Recommendation and Commercial Standard, through review and revision, whenever, in the opinion of the industry, changing conditions warrant such action.

Pine Plywood (Ponderosa Pine, Sugar Pine, and Idaho White Pine)

(Second Edition)

[EFFECTIVE DECEMBER 1, 1956]

1. PURPOSE

1.1 It is the purpose of this Commercial Standard to recognize the increasing specialized uses of pine plywood, and to provide standard grading rules as a common basis of understanding in the industry. General adoption and use of this standard should facilitate procurement of the proper grade of material for its varied uses and provide a better understanding between buyer and seller.

2. SCOPE

2.1 This standard covers requirements for 14 grades of special moisture-resistant Interior and Exterior types of pine plywood. It includes, in addition, test requirements, standard sizes, size tolerances, inspection rules, labeling, and nomenclature and definitions.

3. DEFINITION

3.1 Pine plywood is a built-up panel of laminated veneers in which the grain of each piece is at right angles to that of the piece adjacent to it. The dried veneers are united under high pressure with a bonding agent, making the panel as strong as or stronger than the wood itself. The alternating direction of the grain with each contiguous layer of wood utilizes the inherent strength properties of wood in a way that minimizes shrinkage and splitting.

4. GENERAL REQUIREMENTS

4.1 *Workmanship.*—Pine plywood shall be well manufactured and free from blisters, laps, or other defects not specifically permitted in the rules for the various grades. Unless otherwise specified, it shall be smoothly sanded on two sides. When rough or unsanded plywood is specified, it may have paper tape on either the face or the back, or both. Veneers shall be tight, smoothly cut, and of uniform thickness.

4.2 *Bonding.*—The entire area of each contacting surface of the plywood shall be bonded in an approved manner with an adhesive that will meet the test requirements as given in section 7 for each use classification. No tape shall be used in any glue-line.

4.3 *Moisture content.*—Moisture content of any panel at time of shipment from mill shall not exceed 18 percent of dry weight as determined by the oven-dry test.

5. DETAIL REQUIREMENTS

5.1 *Veneers.*—Rotary-cut veneers shall be 1/12 in. or thicker before sanding in panels 1/4 in. and thicker. Quality of veneers shall be as defined under veneer classifications (par. 5.3), and the grades of veneer for Interior and Exterior types of plywood panels shall be as given in tables 1 and 2.

5.2 *Core and crossbands* of all panels, unless otherwise specified, shall be of one or more pieces of veneer.

5.3 *Veneer classifications.*

5.3.1 All veneers used in pine plywood shall be of one of the following grades (grade *N* (Clear) being the best of the five classifications):

5.3.1.1 *Grade N (Clear)* shall consist of one or more pieces of smoothly cut veneer, well joined and well matched for grain and color. The veneer shall be free from knots, splits, checks, pitch pockets, and other open defects. It shall be free from blue and brown stains, but slight discolorations and heart and sap streaks shall be permitted. Tightly closed end-checks, shims not more than 3/16 in. wide that occur at ends of panels, and inconspicuous well-matched small chisel patches shall be permitted. All repairs and patches shall run parallel with the grain and all veneer joints shall be parallel to the edge of the panel. No overlapping of repairs is permitted. This grade is suitable for uses where a light-stain finish, a natural finish, or an enamel finish is desired.

5.3.1.2 *Grade A (Sound)* shall be of one or more pieces of firm, smoothly cut veneer. When of more than one piece, the pieces shall be well joined. The veneer shall be free from knots, splits, checks, pitch pockets, and other open defects. Streaks, discolorations, black pinhead specks, shims, and neatly made patches shall be permitted, but not more than 12 veneer patches shall occur in any 4-ft. by 8-ft. *A* face, with proportionate limits for other sizes of panels. Shims may not be used over or around patches. Repair of any one defect in a panel shall be limited to two patches. All patches and repairs shall run parallel with the grain. Suitable plastic fillers may be used to fill small cracks or checks not more than 1/32 in. wide, small splits or openings up to 1/16 in. wide, if not exceeding 2 in. in length, and small chipped areas or openings not more than 1/8 in. wide by 1/4 in. long. This grade shall present a smooth surface suitable for painting.

5.3.1.3 *Grade B (Solid)* shall present a solid surface free from open defects. In addition to characteristics permitted in grade *A* (Sound), this veneer shall permit plugs as well as synthetic plugs that present a smooth hard surface, slightly rough but not torn grain, and other minor sanding and patching defects. This grade shall present a smooth surface suitable for painting.

5.3.1.4 *Grade C (Standard)* may contain knotholes not larger than 1 in. in least dimension; open pitch pockets not wider than 1 in.; splits not wider than 3/16 in. which taper to a point; worm or borer holes not more than 5/8 in. wide or 1 1/2 in. long; knots if tight and not more than 1 1/2 in. in least dimension; and plugs, patches, shims, sanding defects, and other characteristics in number and size that will not impair the serviceability of the panel.

5.3.1.5 *Grade D (Utility)* shall permit no knotholes greater than

2½ in. in any dimension, no pitch pockets more than 2 in. wide by 4 in. long (or equivalent area if of lesser width), and no splits wider than ½ in. Splits ½ in. wide at widest point may be one-fourth panel length, those not more than ¼ in. wide at widest point may be half-panel length, and those not more than 3/16 in. wide may be full-panel length, but all splits shall taper to a point at one end. Any number of plugs, patches, shims, worm or borer holes, sanding defects, and other characteristics are permitted provided they do not seriously impair the strength or serviceability of the panel.

6. TYPES OF PINE PLYWOOD

6.1 *Interior type.*—This type represents plywood with a high degree of moisture resistance, where its application requires that it shall retain its original form and practically all of its strength when subjected to moisture normally associated with interior applications. Plywood of this type shall meet the test requirements set forth in paragraph 7.2. This type is available in the grades given in table 1.

TABLE 1. *Interior type grades—minimum quality of veneers*

Grade	Face	Back	Inner plies [1]	Additional limitations
NN (Clear 2 sides)	N (Clear)	N (Clear)	C (Standard)	Sanded 2 sides. All-pine construction.
NA (Clear-Sound)	N (Clear)	A (Sound)	C (Standard)	Do.
AA (Sound 2 sides)	A (Sound)	A (Sound)	C (Standard)	Do.
AB (Sound-Solid)	A (Sound)	B (Solid)	C (Standard)	Do.
AD (Sound 1 side)	A (Sound)	D (Utility)	D (Utility)	Do.
BB (Solid 2 sides)	B (Solid)	B (Solid)	C (Standard)	Sanded 2 sides. Intermixing of species allowed in inner plies.
BD (Solid 1 side)	B (Solid)	D (Utility)	D (Utility)	Do.
CD (Sheathing)	C (Standard)	D (Utility)	D (Utility)	Unsanded. Intermixing of species allowed in inner plies.

[1] This listing applies to 3/16-in. and thicker inner plies. Thinner inner plies in Interior type plywood may be of a *D* (Utility) grade, except that 7-ply ¾-in. plywood shall be constructed with inner plies of *C* (Standard) grade.

6.1.1 Underlayment, interior sheathing, and concrete form grades shall be made with an adhesive possessing mold resistance equivalent to that obtained by adding 5 pounds of pentachlorophenol, or its sodium salt, per 100 pounds of dry glue base to plain protein glues.

6.2 *Exterior type.*—This type represents plywood having the ultimate in moisture resistance; a plywood which will retain its original form and strength when repeatedly wet and dried and otherwise subjected to the weather, and which is suitable for permanent exterior use. It shall be free from core gaps, core laps, and core voids that impair the strength or the serviceability of the panel. All repatches and shims shall be set with adhesive meeting performance standards for Exterior plywood. All veneers used in Exterior type panels shall be of *C* grade or better as defined in paragraphs 5.3.1.1 to 5.3.1.4. All Exterior panels shall be so designated by the descriptive symbol "EXT," branded or stamped on the edge of each panel. Plywood of this type shall meet the test requirements set forth in paragraphs 7.3 to 7.3.3. This type is available in the grades given in table 2.

TABLE 2. *Exterior type grades—minimum quality of veneers*

Grade	Face	Back	Inner plies	Additional limitations
AA (Sound 2 sides)	A (Sound)	A (Sound)	C (Standard)	Sanded 2 sides. All-pine construction.
AB (Sound–Solid)	A (Sound)	B (Solid)	C (Standard)	Do.
AC (Sound 1 side)	A (Sound)	C (Standard)	C (Standard)	Do.
BB (Solid 2 sides), (concrete form).	B (Solid)	B (Solid)	C (Standard)	Sanded 2 sides. Intermixing of species allowed in inner plies.
BC (Solid 1 side)	B (Solid)	C (Standard)	C (Standard)	Do.
CC (Sheathing)	C (Standard)	C (Standard)	C (Standard)	Unsanded. Intermixing of species allowed in inner plies.

7. SAMPLING AND TESTING

7.1 *Sampling.*—Ten test panels shall be taken at random from any shipment. Test panels shall be selected to represent as many variations in grades and thicknesses as possible and they shall be selected from locations distributed as widely as is practicable throughout the shipment. From each Exterior panel selected, 3 test pieces shall be cut at random, and from each test piece 10 test specimens shall be cut. From each Interior panel selected, a 6-in. by 6-in. test piece shall be cut from each end approximately at midwidth of the panel, and from each edge approximately at midlength of the panel; a fifth piece shall be cut from the middle or the center of the panel.

7.2 *Test for Interior type panels.*

7.2.1 *Delamination test.*—Test pieces shall be submerged in water at room temperature for 4 hours, and then dried at a temperature not to exceed 100° F. for 20 hours. This cycle shall be repeated until all samples have failed or have completed 15 cycles. (See par. 7.4.1.)

7.3 *Tests for Exterior type panels.*

7.3.1 *Cold-soaking test.*—Five shear specimens shall be cut, as shown in figure 1, from each test piece. If the number of plies exceeds 3, the cuts shall be made so as to test any 2 of the joints, but the additional plies need not be stripped, except as demanded by limitations of the width of the retaining jaws on the testing device. When desired,

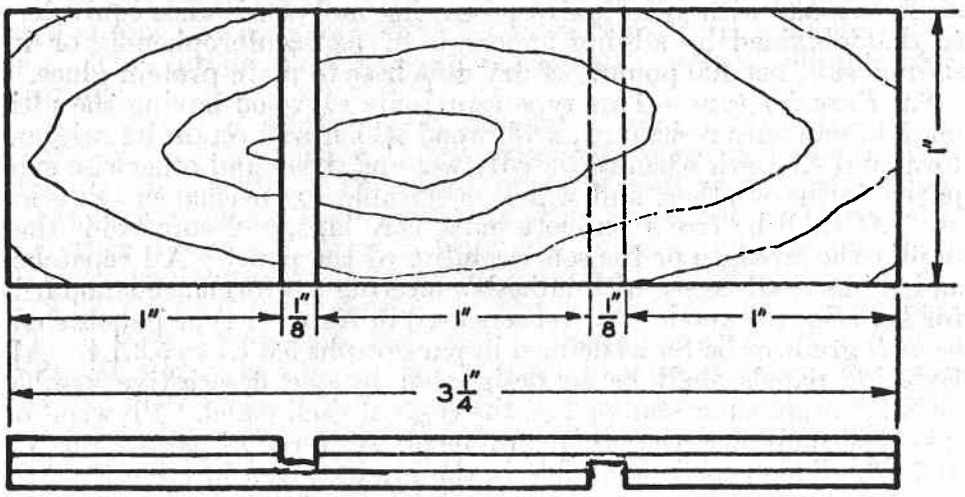

FIGURE 1. *Shear specimen.*

special jaws may be constructed to accommodate the thicker plywood. If the number of plies exceeds 3, the choice of joints to be tested shall be left to the discretion of the inspector, but at least one-half of the test shall include the innermost joints.

The specimens shall be submerged in water at room temperature for 48 hours and dried for 8 hours at a temperature of 145° F (±5° F); this shall be followed by 2 cycles of soaking for 16 hours and drying for 8 hours under the conditions described above. The shear specimens shall be soaked again for 16 hours and tested while wet in a shear testing device (as illustrated in fig. 2) by placing them in the jaws of the device, to which a load shall be applied at the rate of 600 to 1,000 pounds a minute until failure. The percentage of wood failure of the speciments shall be estimated. (See par. 7.4.2.)

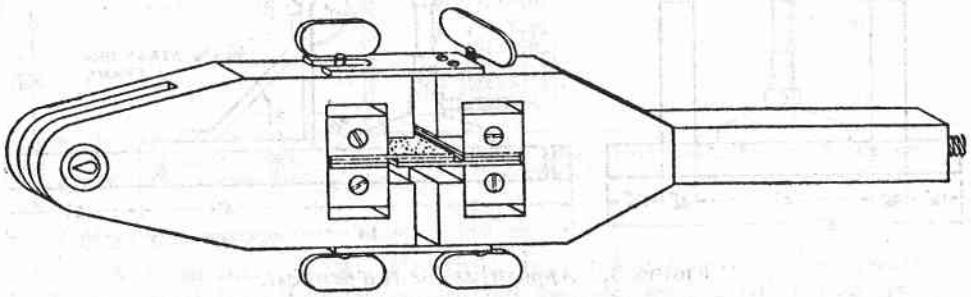

FIGURE 2. *Jaws for shear test.*

7.3.2 *Boiling test.*—Shear specimens shall be taken as described in paragraph 7.3.1, and boiled in water for 4 hours, and then dried for 20 hours at a temperature of 145° F (±5° F). They shall be boiled again for 4 hours, and then tested while wet as described in paragraph 7.3.1. The percentage of wood failure of the specimens shall be estimated. (See par. 7.4.2.)

7.3.3 *Fire test.*—A 5½-in. by 8-in. piece shall be taken from each of the 5 selected test panels and placed on the stand as illustrated in figure 3, then subjected to an 800° to 900° Centigrade flame from a Bunsen-type burner for 10 minutes, or, in the case of a thin specimen, until a brown char area appears on the back side. The burner shall be equipped with a wing top to envelop the entire width of the specimen in flame. The top of the burner shall be 1 in. from the specimen face, and the flame 1½ in. high. The flame shall impinge on the face of the specimen 2 in. from the bottom end. After the test, the sample shall be removed from the stand and the glue-lines examined for delamination by separating the charred plies with a sharp chisel-like instrument. Any delamination due to combustion shall be considered as failure, except when occurring at a localized defect permitted in the grade. (See par. 7.4.2.1.)

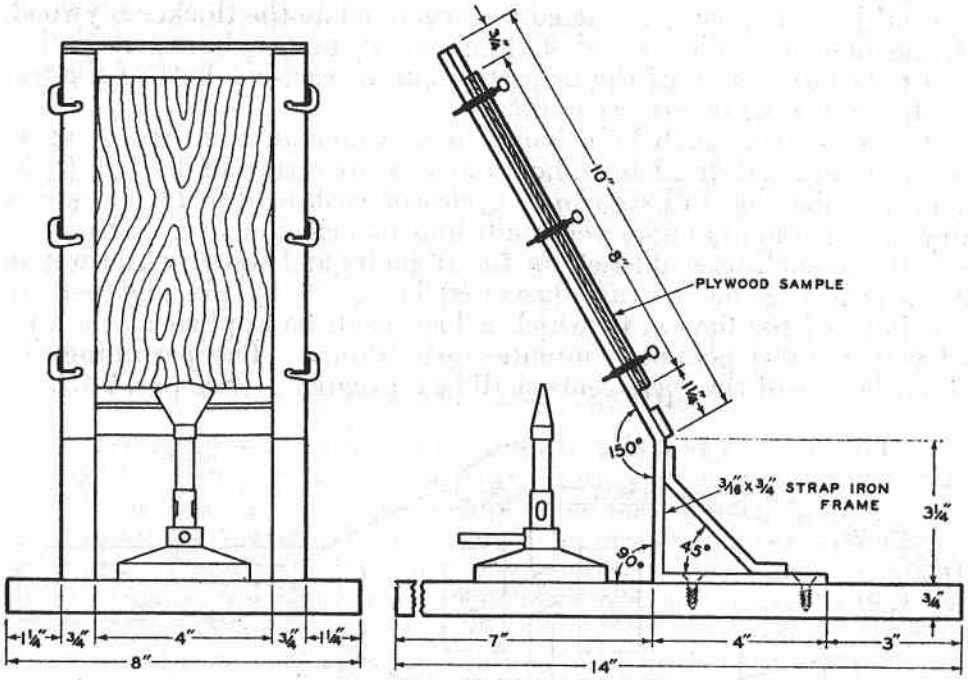

FIGURE 3. *Apparatus for the fire test.*

7.4 *Interpretation of tests.*

7.4.1 *Interior type panels.*—A single visible delamination of ¼ in. or more in depth and of over 2 in. in length along the edge of a 6-in. by 6-in. test piece shall be considered as failure. When delamination occurs at a localized defect permitted in the grade, that test piece shall be discarded. The average number of cycles which the test pieces shall withstand is 10 or more, and at least 85 percent of the specimens shall withstand 3 cycles. If the test pieces fail to meet these requirements, 10 additional panels shall be selected and tested as described in paragraph 7.2. Then the test pieces from both groups of 10, considered together, shall meet the above test requirements.

7.4.2 *Exterior type panels.*—Specimens cut through localized defects permitted in the grade shall be discarded. A test piece shall be rated by the combined results of both the cold-soaking test and the boiling test—generally 10 specimens in all. If the average wood failure of the 10 specimens is less than 60 percent, or if that of more than 1 of the specimens is less than 30 percent, the test piece fails. If more than 1 test piece fails, that panel fails. If 1 or none of the 10 panels fails, the shipment is accepted; if more than 2 fail, the shipment is rejected. If 2 panels fail, another series of 10 panels is tested. If 1 or none of the panels fails in this series, the shipment is accepted; otherwise, it is rejected. If the average wood failure of the first 10 panels is less than 80 percent, a second series of 10 is tested regardless of the number of failures. If the average wood failure of the 20 panels combined is less than 80 percent, the shipment is rejected.

7.4.2.1 If more than 1 panel fails the fire test, the shipment may be rejected; if 1 panel fails, a second series of 5 shall be tested, all of which must pass.

8. PLYWOOD SIZES

8.1 Pine plywood is made in the standard sizes given in table 3.

TABLE 3. *Standard pine plywood sizes—Interior and Exterior types*

Grade	Width	Length	Thickness—ply	Sanding
	Inches	*Inches*	*Inch*	
NN	48	96	¾ (5-ply)	Sanded 2 sides.
NA		84	¾ (7-ply)	Do.
ND	48	96	¼ (3-ply)	Do.
		84		
AA	30	60	¼ (3-ply)	Do.
AB		72	⅜ (3-ply)	Do.
AC	36	84	½ (5-ply)	Do.
AD	42	96	⅝ (5-ply)	Do.
BB	48	108	¾ (5-ply)	Do.
BC		120	¾ (7-ply)	Do.
BD			5/16 (3-ply)	Unsanded.
		72	⅜ (3-ply)	Do.
CD	36	84	½ (5-ply)	Do.
CC	48	96	⅝ (5-ply)	Do.
		120	¾ (5-ply)	Do.

NOTE.—Any size and any thickness of panel conforming in all other respects to the various requirements of this standard shall be considered as conforming to this standard.

8.2 *Size tolerances.*

8.2.1 A tolerance of 1/64 (0.0156) in. under or over the specified thickness shall be allowed on sanded panels, and a tolerance of 1/32 (0.0312) in. on unsanded panels.

8.2.2 A tolerance of 1/32 (0.0312) in. over or under the specified width and/or length shall be allowed, but all panels shall be square within 1/8 (0.1250) in. All panels shall be sawed so that a straight line drawn from one corner to the adjacent corner shall fall within 1/16 in. of the panel edge.

8.3 *Measurement.*—The footage of panels is figured on a full-inch basis. When panels are cut to a special size and the width and/or length is in fractions of an inch, these fractional measurements shall be counted as of the next full inch.

9. INSPECTION

9.1 All plywood guaranteed to conform to the Commercial Standard grading rules is sold subject to inspection in the white condition only, except concrete form material, which may have a priming of oil or other preparation before it is shipped. All complaints regarding the quality of any shipment must be made within 15 days from receipt thereof.

9.2 If the grade of any plywood shipment is in dispute, and a reinspection is demanded, the cost of such reinspection shall be borne by the seller; and the shipment is settled for on the basis of the reinspection report if it is more than 5 percent below grade, or if it contains more than 1 percent of mismanufactured panels having defects such as short core, lapped core, blisters, delamination, etc., which render the panel unfit for normal use. The buyer need not accept such defective panels shipped as any standard grade listed in this Commercial Standard.

9.3 If reinspection establishes the shipment to be 5 percent or less below grade, and to contain 1 percent or less of mismanufactured panels, the buyer shall pay the cost of reinspection and shall pay for the shipment as invoiced.

10. LABELING

10.1 In order that the purchaser may be assured of obtaining ponderosa pine, sugar pine, or Idaho white pine plywood conforming to the requirements of this standard, it is recommended that shipments complying therewith be accompanied by a statement containing the following wording:

> This shipment of pine plywood (ponderosa pine, sugar pine, or Idaho white pine) complies with all the requirements of Commercial Standard CS157–56, as developed by the trade under the procedure of the Commodity Standards Division, and issued by the U. S. Department of Commerce.
>
> ---
> (Name of manufacturer)

11. NOMENCLATURE

11.1 The terms used in this standard are defined as follows:

Back.—The side reverse to the face of the panel.
Borer holes.—Voids made by wood-boring insects or worms.
Centers.—See *Cores.*
Checks.—Small splits running parallel with the grain of the wood, caused chiefly by strains produced in seasoning.
Cores.—The cores, or centers, are the innermost layers in plywood construction.
Crossbanding.—Veneer used in the construction of plywood with the grain running at right angles to that of the face and back.
Defects, open.—Checks, splits, open joints, cracks, loose knots, and other defects interrupting the smooth continuity of the panel surface.
Exterior type.—Refers to the type of plywood intended for outdoor uses. This type is bonded with adhesives affording the ultimate in water and moisture resistance. (See par. 6.2 and table 2.) There are several grades within this type.
Face.—The better side of a panel in any grade calling for a face and a back; also, either side of a panel where the grading rules draw no distinction between face and back. The quality of the face and back determines the grade of panel within either the Interior or the Exterior type.
Heartwood.—The darker-colored wood occurring in the inner portion of the tree, sometimes referred to as "heart."
Interior type.—Refers to the type of plywood intended for inside uses and for uses in constructions which may be subjected to moisture normally associated with interior applications. (See par. 6.1 and table 1.) There are several grades within this type.
Knot.—Cross section of a branch or limb whose grain usually runs at right angles to that of the piece in which it is found.

Knotholes.—Voids produced by the dropping of knots from the wood in which they were originally embedded.

Lap.—A condition where the veneers used are so misplaced that one piece overlaps the other instead of making a smooth butt joint.

Patches.—Insertions of sound wood glued and placed into panels from which defective portions have been removed.

Small patch.—A patch not larger than ½ in. by 3 in.

Chisel patch.—A small boat-shaped hand patch not larger than ⅜ in. by 2½ in.

Pitch pocket.—A well-defined opening between rings of annual growth, usually containing or which has contained more or less pitch, either solid or liquid.

Pitch streak.—A well-defined accumulation of pitch in a more or less regular streak.

Plugs.—Sound wood, usually circular, for replacing defective portions that have been removed. Plugs usually are held in veneer by friction only until the veneers are bonded into plywood. Synthetic plugs are composed of a fiber and resin aggregate; they are used to fill openings and to provide a smooth, durable surface.

Ply.—See *Veneer.*

Sapwood.—The lighter-colored wood occurring in the outer portion of the tree; sometimes referred to as "sap."

Shim.—A long, narrow repair not more than 3/16 in. wide.

Split.—A complete separation of veneer fibers parallel to the grain, caused chiefly by manufacturing processes or handling.

Streak.—Discoloration caused by an accumulation of resinous substance, or by chemical change within the wood.

Veneer.—A thin sheet of wood rotary cut, sliced or sawed from a log, bolt, or flitch. Veneer may be referred to as a ply when assembled into a panel.

Veneer patches.—Patches inserted in veneer before the panel is assembled for pressing.

12. EFFECTIVE DATE

12.1 Having been passed through the regular procedure of the Commodity Standards Division, and approved by the acceptors hereinafter listed, this Commercial Standard was issued by the United States Department of Commerce, effective from December 1, 1956.

EDWIN W. ELY,
Chief, Commodity Standards Division.

HISTORY OF PROJECT

First edition.—On November 6, 1947, leading manufacturers of ponderosa pine and sugar pine plywood requested the United States Department of Commerce to cooperate in establishing a Commercial Standard for these products, as a means of providing all concerned with a nationally recognized specification. In compliance with this request, the Department's Commodity Standards Division submitted the manufacturers' preliminary draft to representative producers, distributors, and consumer organizations for advance review and comment.

Some constructive suggestions were received, and these were incorporated in the proposed standard. On August 23, 1948, the recommended standard was circulated to all interests for approval, and was subsequently accepted by a satisfactory majority of the industry. It was approved for promulgation and publication as Commercial Standard CS157–49, and made effective from March 25, 1949.

First revision.—At the request of a manufacturer of pine plywood, dated September 28, 1955, the Commodity Standards Division prepared a revision of CS157–49, based on a draft submitted by a technical committee of the industry. This proposal was subsequently approved by the standing committee, and on June 1, 1956, the recommended revision was circulated to the industry for consideration and acceptance.

An announcement of the successful completion of the revision was issued on November 1, 1956. Identified as Commercial Standard CS157–56, and effective from December 1, 1956, the revised standard applies to plywood made from Idaho white pine in addition to the two kinds previously covered, ponderosa pine and sugar pine plywood. Two tables have been added giving the grades of veneer for the Interior and the Exterior types of plywood panels.

Project Manager: H. A. Bonnet, Commodity Standards Division, Office of Technical Services.

STANDING COMMITTEE

The following individuals comprise the membership of the standing committee organized by the industry, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comments concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, which acts as secretary for the committee.

FAY L. FOVAL (chairman), The Long-Bell Lumber Co., P. O. Box 1079, Longview, Wash.

S. L. MICHAEL, Milwaukie Plywood & Door, Inc., P. O. Box 5954, Milwaukie 22, Oreg.

GENE C. BREWER, U. S. Plywood Corp., Shasta Plywood Division, P. O. Box 1688, Redding, Calif.

C. W. LICKESS, Timber Products Co., P. O. Box 1032, Medford, Oreg.

C. W. OCKER, Curtis Cos., Inc., Clinton, Iowa (representing National Woodwork Manufacturers Association).

P. S. HILL, Harbor Plywood Corp., 1444 West Cermak Road, Chicago 8, Ill. (representing Woodwork Jobbers Service Bureau).

CHAS. E. DEVLIN, National Plywood Distributors Association, 20 North Wacker Drive, Chicago 6, Ill.

CONRAD P. HARNESS, Prefabricated Home Manufacturers' Institute, 908 20th St. NW., Washington 6, D. C.

GERALD L. PALMER, American Specification Institute, 134 North La Salle St., Chicago 2, Ill.

NORMAN F. STAMBAUGH, 78 Marietta St., Atlanta 1, Ga. (representing the American Institute of Architects).

ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this Commercial Standard.

Date_____

Commodity Standards Division,
Office of Technical Services,
U. S. Department of Commerce,
Washington 25, D. C.

Gentlemen:

We believe that this Commercial Standard constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production [1] distribution [1] purchase [1] testing [1]

of pine plywood (ponderosa pine, sugar pine, or Idaho white pine).

We reserve the right to depart from the standard as we deem advisable.

We understand, of course, that only those products which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

(Cut on this line)

Signature of authorized officer_____
(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer_____

Organization_____
(Fill in exactly as it should be listed)

Street address_____

City, zone, and State_____

[1] Underscore the one that applies. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade associations, trade papers, etc., desiring to record their general support, the words "General Support" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial Standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of Commercial Standards is to establish, for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the standard, where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of Commercial Standards on a nationwide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or of the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The individual organizations listed below have accepted this standard for use as far as practicable in the production, distribution, testing, or purchase of pine plywood. In accepting the standard, they reserved the right to depart from it as they individually deem advisable. It is expected that products which actually comply with the requirements of this standard in all respects will be regularly identified or labeled as conforming thereto, and that purchasers will require such specific evidence of conformity.

ASSOCIATIONS

(General Support)

American Specification Institute, Chicago, Ill.
Carolina Lumber & Building Supply Association, Charlotte, N. C.
Hardwood Plywood Institute, Chicago, Ill.
Michigan Retail Lumber Dealers Association, Lansing, Mich.
Mississippi Retail Lumber Dealers Association, Inc., Jackson, Miss.
National Woodwork Manufacturers Association, Chicago, Ill.
Prefabricated Home Manufacturers' Institute, Washington, D. C.

FIRMS AND OTHER INTERESTS

Adams, Franklin O., Tampa, Fla.
Algoma Plywood and Veneer Co., Division of United States Plywood Corp., Algoma, Wis.
American Sash & Door Co., Kansas City, Mo.
Andrews, C. E., Lumber Co., New Bethlehem, Pa.
Associated Door & Plywood Co., Chicago, Ill.
Astoria Plywood Corp., Astoria, Oreg.
Baltimore & Ohio Railroad Co., Baltimore, Md.
Baxter, C. B., & Co., Kansas City, Mo.
Besch, Carl, Co., Inc., New York, N. Y.
Borden Co., The, Seattle, Wash.
Bosman & Casson, Inc., Union, N. J.
Bruett, T. A., Lumber, Inc., Milwaukee, Wis.
Brust & Brust, Milwaukee, Wis.
Buffalo Plywood Corp., Buffalo, N. Y.
Buffelen Sales Company of Tacoma, Wash., Fort Worth, Tex.
California Panel & Veneer Co., Los Angeles, Calif.
Camlet, J. Thomas, Passaic, N. J.
Cellar Lumber Co., Westerville, Ohio
Cincinnati Butchers' Supply Co., Cincinnati, Ohio
Cincinnati, City of, Department of Purchasing, Cincinnati, Ohio
Coale, Thomas E., Lumber Co., Philadelphia, Pa.
Conrad & Cummings, Binghamton, N. Y.
Continental Forest Products Co., Cedar Rapids, Iowa
Crowell, Lancaster & Higgins, Bangor, Maine
Curran Bros., Pomona, Calif.
Curtis Cos., Inc., Clinton, Iowa
Darby, Bogner & Associates, Milwaukee, Wis.
Davidson Sash & Door Co., Inc., Lake Charles, La.
Delmarva Lumber & Millwork Co., Inc., Westville, N. J.
Dickerson Lumber Co., Huntington, W. Va.
Downes Lumber Co., Boston, Mass.
Elizabeth Lumber Co., Inc., Elizabeth, N. J.
Farley-Loetscher Co., Sioux Falls, S. Dak.
Fischer, Charles F., & Co., Inc., Rye, N. Y.
Flannagan, Eric G., & Sons, Henderson, N. C.
Fort Wayne Builders Supply Co., Fort Wayne, Ind.
Frederick Bros., Inc., Pottstown, Pa.
Fry-Fulton Lumber Co., St. Louis, Mo.
Gaines Hardwood Lumber Co., St. Louis, Mo.
Garratt & Co., Wayne, Pa.
General Millwork Corp., Utica, N. Y.
Godfrey Lumber Co., Boston, Mass.
Goshen Sash & Door Co., Goshen, Ind.
Groffmann, L. C., St. Louis, Mo.
Grogan-Robinson Lumber Co., Great Falls, Mont.
Haralson & Mott, Fort Smith, Ark.
Harbor Sales Co., Inc., Baltimore, Md.
Hastings, A. W., & Co., Inc., Somerville, Mass.
Henrich Plywood Co., Inc., Buffalo, N. Y.
Hermsdorf Fixture Manufacturing Co., Inc., Manchester, N. H.
Higgins, J. E., Lumber Co., San Francisco, Calif.
Hines, Edward, Lumber Co., Chicago, Ill.
Interstate Sash & Door Co., Canton, Ohio
Jacksonville Sash & Door Co., Jacksonville, Fla.
James Lumber Co., Boston, Mass.
Jameson Lumber Co., Los Angeles, Calif.
Kaaz Woodwork Co., Inc., Leavenworth, Kans.
Kansas, State of, Department of Administration, Purchasing Division, Topeka, Kans.
Law, Law, Potter & Nystrom, Madison, Wis.
Levi, Solomon, Brooklyn, N. Y.
Logan Lumber Co., Tampa, Fla.
Logan Lumber Co., Miami, Fla.
Long-Bell Lumber Co., Longview, Wash.
Lord & Bushnell Lumber Co., Chicago, Ill.
Los Angeles, City of, Los Angeles, Calif.
Lyons Lumber & Supply Corp., Jamestown, N. Y.
Macy, R. H., & Co., Inc., New York, N. Y.
Mahoney Sash & Door Co., Canton, Ohio
Mann and Co., Hutchinson, Kans.
Marquard Sash & Door Manufacturing Co., Cleveland, Ohio
Marsh & Truman Lumber Co., Chicago, Ill.
McPhillips Manufacturing Co., Inc., Mobile, Ala.
Merritt Lumber Yards, Inc., Reading, Pa.
Midwest Plywood Co., Detroit, Mich.
Miller, Vrydagh & Miller, Terre Haute, Ind.
Milwaukie Plywood Corp., Milwaukie, Oreg.

Moore Dry Dock Co., Oakland, Calif.
Moore Lumber Co., Le Mars, Iowa
Morrison-Merrill & Co., Salt Lake City, Utah
National Plywood Co., Inc., New York, N. Y.
Neal-Blun Co., Savannah, Ga.
Newton Lumber & Manufacturing Co., Colorado Springs, Colo.
Niagara Plywood Co., Inc., Buffalo, N. Y.
O & N Lumber Co., Menomonie, Wis.
Oklahoma Sash & Door Co., Oklahoma City, Okla.
Patzig Testing Laboratories, Des Moines, Iowa
Pease Woodwork Co., Inc., Hamilton, Ohio
Portsmouth Lumber Corp., Portsmouth, Va.
Potlatch Forests, Inc., Lewiston, Idaho
Pudget Sound Plywood, Inc., Tacoma, Wash.
Resnikoff, Abraham, New York, N. Y.
Ripley-Hopping, Inc., Newark, N. J.
Robinson, Fred J., Lumber Co., Detroit, Mich.
Rock Island Millwork Co., Rock Island, Ill.
Rolfe Building Materials Co., Inc., New Brunswick, N. J.
Rust Sash & Door Co., Kansas City, Mo.
Sanders Bros. Manufacturing Co., Ottawa, Ill.
Scranton Plywood Co., Forty Fort, Pa.
Semling Menke Co., Inc., Merrill, Wis.
Shenk, Henry, Co., Erie, Pa.
Sierra Mill & Building Materials Co., Sacramento, Calif.
Snellstrom Lumber Co., Eugene, Oreg.
Southern Oregon Plywood, Inc., Grants Pass, Oreg.
Southwestern Sash & Door Co., Joplin, Mo.
Standard Lumber Co., Spokane, Wash.
Stoetzel, Ralph, Chicago, Ill.
Strable Lumber Co., Oakland, Calif.
Stravs, Carl B., Minneapolis, Minn.
Swan Lake Moulding Co., Klamath Falls, Oreg.
Sweet's Catalog Service, New York, N. Y. (General support.)
Synvar Corp., Wilmington, Del.
Teachout Sash, Door & Glass Co., Dearborn, Mich.
Timberline, Inc., Kansas City, Mo.
Trexler Lumber Co., Allentown, Pa.
United States Plywood Corp., Shasta Division, Redding, Calif.
Velde Lumber Co., Pekin, Ill.
Vogel, Willis A., Toledo, Ohio
Wanke Panel Co., Portland, Oreg.
Warren Wholesale Co., Nashville, Tenn.
Welch, Carroll E., Huntington, N. Y.
Western Door & Sash Co., Oakland, Calif.
Weyerhaeuser Sales Co., St. Paul, Minn.
Whissel, L. N., Lumber Co., Inc., Buffalo, N. Y.
White Bros., Oakland, Calif.
Winde-McCormick Lumber Co., Boston, Mass.
Wood Lumber Co., Birmingham, Ala.
Woodward Lumber Co., Seattle, Wash.
Zimmerman, A. C., Los Angeles, Calif.

UNITED STATES GOVERNMENT

General Services Administration, Public Buildings Service, Design and Construction Division, Washington, D. C.
Veterans Administration Office of Construction, Design Service, Washington, D. C.

OTHER COMMERCIAL STANDARDS

A list of all effective Commercial Standards may be obtained from the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. These publications may be purchased at the prices indicated on the list, which also includes directions for ordering copies.

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